

# CHAPTER 3

## THEORY

**“IN A WORLD THAT HAS BECOME INCREASINGLY VIRTUAL, THE MUSEUM IS AN IMPORTANT REFUGE OF REALITY, MAKING BOTH ITS CONTENTS AND THEIR RELATION TO ARCHITECTURE MORE IMPORTANT THAN EVER BEFORE” (NEWHOUSE 1998:270).**

### 3.1. INTRODUCTION

In order to be able to re-design a museum such as the D:NMCH, the history of museums is investigated, which includes a general overview, as well as a study of contemporary approach to museum design. As a museum is a place with a diverse range of visitors, wayfinding is studied. This also relates to the different ways visitors learn, how they interpret information and their experience.

### 3.2. MUSEOLOGY

Museology is the study of museums, and how museums developed into their institutional role in education through social and political forces.

“A museum is a non-profit making, permanent institution in the service of society and of its development, open to the public, which acquires, conserves, researches, communicates and exhibits, for purposes of study, education and enjoyment, the tangible and intangible evidence of people and their environment” (ICOM 2010).

Diagram 3.2.1. illustrates the various parts of museology. Indicated on the right are the important, visible parts of museum design. The communication (education, exhibition, evaluation) is important to showcase the museum content in a successful manner to the visitor.

The word 'museum' is derived from the Greek word 'Museion', which means temple of the Muses, the goddesses protecting arts and sciences. (Bhatnagar 1999.) It is also a place for study and reflection. As seen in the timeline (Figure 3.2.1.), museums started as the grouping together of precious objects in Egyptian times. This later developed into paintings in corridors at the beginning of the 16<sup>th</sup> century. (Newhouse 1998.)

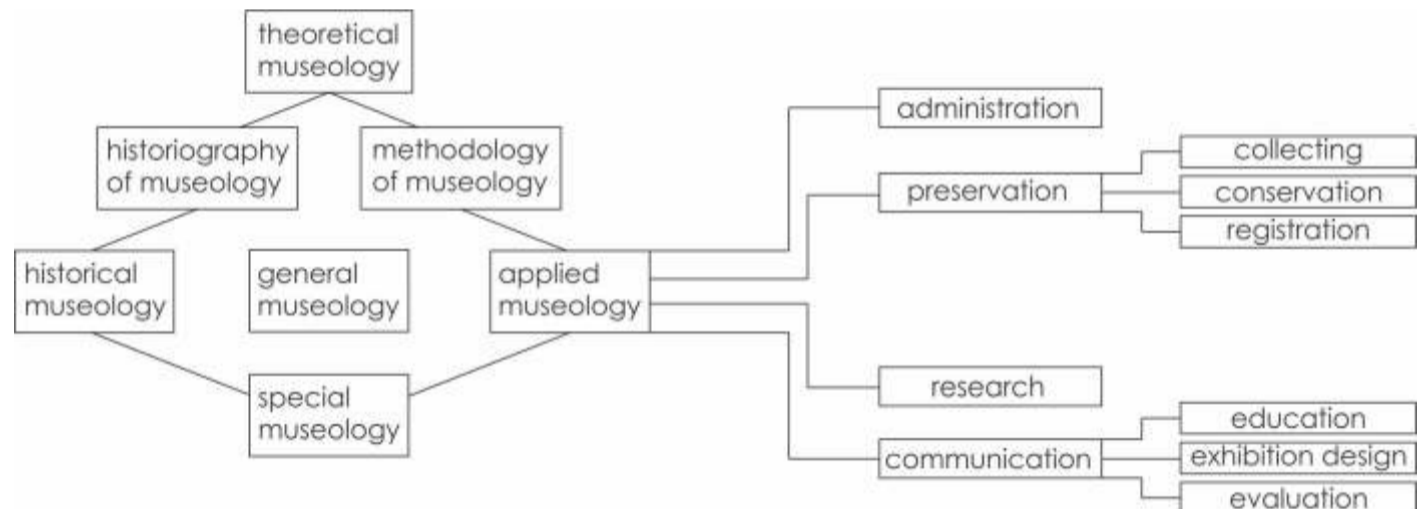


Diagram 3.2.1. Museology content. (Bhatnagar 1999:31).

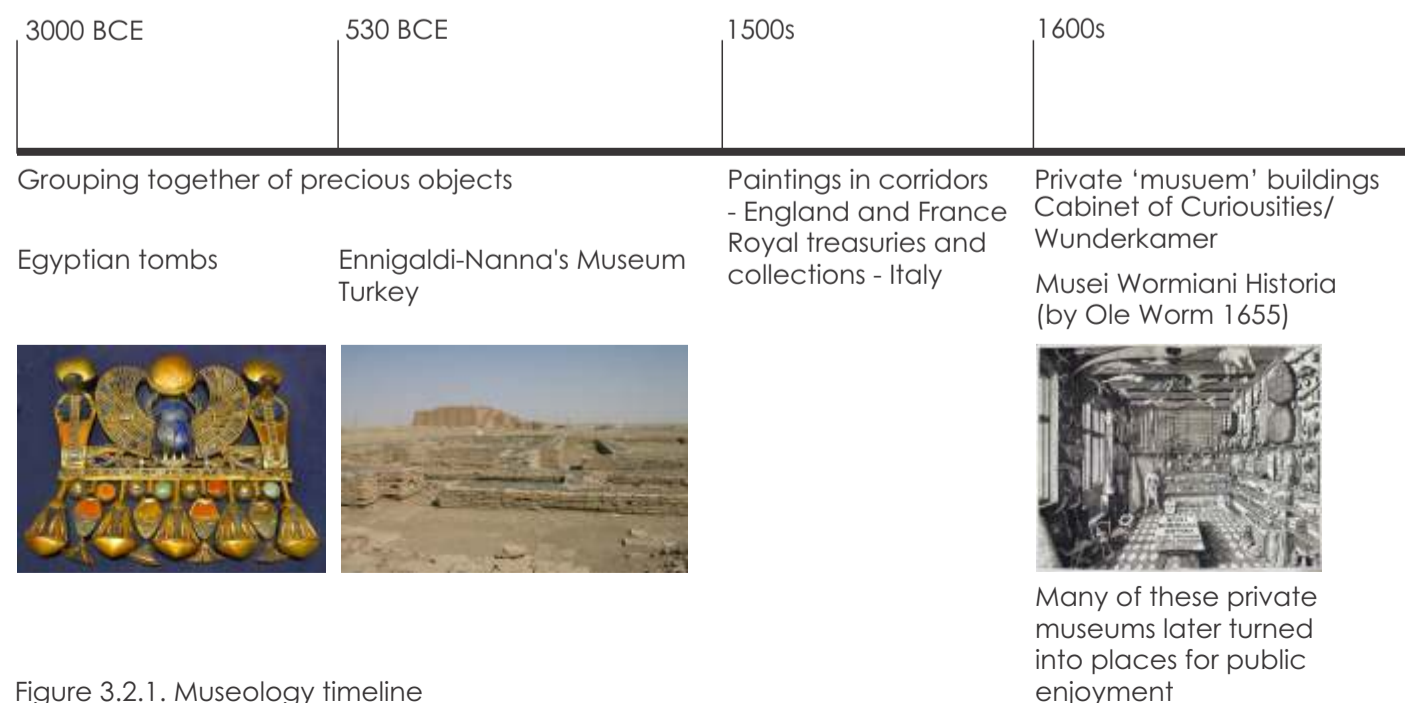


Figure 3.2.1. Museology timeline

Private museum buildings and the 'Wunderkammer', also known as the 'cabinet of curiosities', became popular in the 1600s. "(T)hese cabinets were intended primarily to "... entertain and amuse..." and only secondary to "... instruct or uplift..." (Newhouse 1998:15).

Many galleries that started as a place for private enjoyment developed into places for public enjoyment in the 18<sup>th</sup> century. An example is the Charleston Museum in South Carolina (Figure 3.2.2.) which was founded in 1773 and opened to the public in 1824. (Charleston Museum 2015.)



Figure 3.2.2. Charleston Museum (Charleston Museum 2015)

Painting Gallery (Figure 3.2.3.), 1965, by Philip Johnson in Connecticut. This gallery addressed the issues of storage and fatigue simultaneously by creating a space where the viewer can sit while paintings move past on panels. (Newhouse 1998.)



Figure 3.2.3. Painting Gallery (Favermann 2013)

A 21<sup>st</sup> century example of a successful museum is the Jewish Museum (Figure 3.2.4.), 1999, in Berlin by Daniel Libeskind. (Jewish Museum 2015.) The museum leads visitors through two millennia of German history. The design of the building is used as a tool to represent the Jewish lifestyle before, during and after the Holocaust. (Jewish Museum 2015.)



Figure 3.2.4. Jewish Museum (Jewish Museum 2015)

There is no formal entrance to the building, in order to enter the museum extension, the visitor must enter from the original museum in an underground corridor. "A visitor must endure the anxiety of hiding and losing the sense of direction before coming to a cross roads of three routes" (Kroll 2010). The journey through galleries, empty spaces and dead ends relate symbolically to the journey of Jewish people during World War II. The use of materials, light and volume are important to create a memorable experience. "(T)he building is less of a museum but an experience depicting what most cannot understand" (Kroll 2010). The Jewish Museum is successful in its approach that an important part of Jewish history is showcased in a way that everyone can understand and experience.

1773	1965	1993	2001
<p>Charleston Museum South Carolina, America Open to public 1824 Prominent scientific and natural history collections</p> 	<p>Painting Gallery, Philip Johnson New Canaan Connecticut The viewer sits while the paintings move past on panels, this addressed issues of fatigue and storage</p> 	<p>Private Museum, Montana Emilio Ambasz &amp; Associates Only certain pieces are displayed at a time, thus little space was needed</p> 	<p>Jewish Museum, Berlin Daniel Libeskind Exhibitions lead visitors through two millennia of German Jewish history</p> 

### 3.3. EVALUATION OF THE DITSONG NATIONAL MUSEUM OF CULTURAL HISTORY

The International Council of Museums (ICOM) and Ditsong Museums of South Africa are investigated in terms of their standards and requirements for all museums to successfully create an intervention that revitalises the D:NMCH.

#### 3.3.1. INTERNATIONAL COUNCIL OF MUSEUMS

"The International Council of Museums works for society and its development. It is committed to ensuring the conservation, and protection of cultural goods" (ICOM 2010).

ICOM was created in 1946. ICOM's purpose is to develop standards and improve the quality of the museum world. ICOM sets standards for museum design, management and collection organisation. ICOM carries out international missions in association with UNESCO, INTERPOL and WCO. (ICOM 2010.)

The ICOM mission includes general aspects such as risk management and fighting against the illicit traffic of cultural goods. According to ICOM, museums need to protect the tangible and intangible heritage of the cultural goods in their collections. These collections should be available for current use and it should be ensured that it is passed on to future generations.

An important part of ICOM's mission is that museums should develop their educational roles while attracting wider audiences. These professional standards should be implemented within the global museum community. (ICOM 2010.)

The D:NMCH does not comply with all the standards as set out by ICOM. The D:NMCH does comply with the management concerns of ICOM, but the museum does not comply with ICOM in terms of ensuring that the museum will be passed on to future generations.

#### 3.3.2. DITSONG MUSEUMS OF SOUTH AFRICA

The Ditsong Museum standards are applied according to the Cultural Institutions Act. (Ditsong 2010.) General obligations of Ditsong museums are to render heritage-based services to other museums as well as to individuals and tertiary institutions. All Ditsong museums should carry out research and publish such information for the cultural, social and economic use locally and internationally.

An important part of Ditsong's standards are the "...collection, conservation and safe management of national heritage collections on behalf of the South African nation" (Ditsong 2010). The vision of Ditsong Museums of South Africa is "to be a leading African heritage institution of excellence, accessible to all" (Ditsong 2010).

Exhibitions should be designed and managed together with public programmes with a view to supporting the national educational curriculum. Ditsong Museums of South Africa aim to transform and enhance museums as vehicles for nation building and social cohesion through active conservation, innovative research and relevant public programmes for the benefit of present and future generations. (Ditsong 2010.)

The D:NMCH does not comply with the mission statement of Ditsong Museums of South Africa. The D:NMCH does comply with the management concerns of Ditsong Museums of South Africa, but the museum is not a leading African heritage institution in terms of design and visitor experience. According to Ditsong Museums of South Africa, social cohesion through conservation is an aspect of enhancing museums for present and future generations. This is not clear in the current design of the D:NMCH. The D:NMCH should be a leading example of a cultural history museum, not only in Africa, but internationally as well.

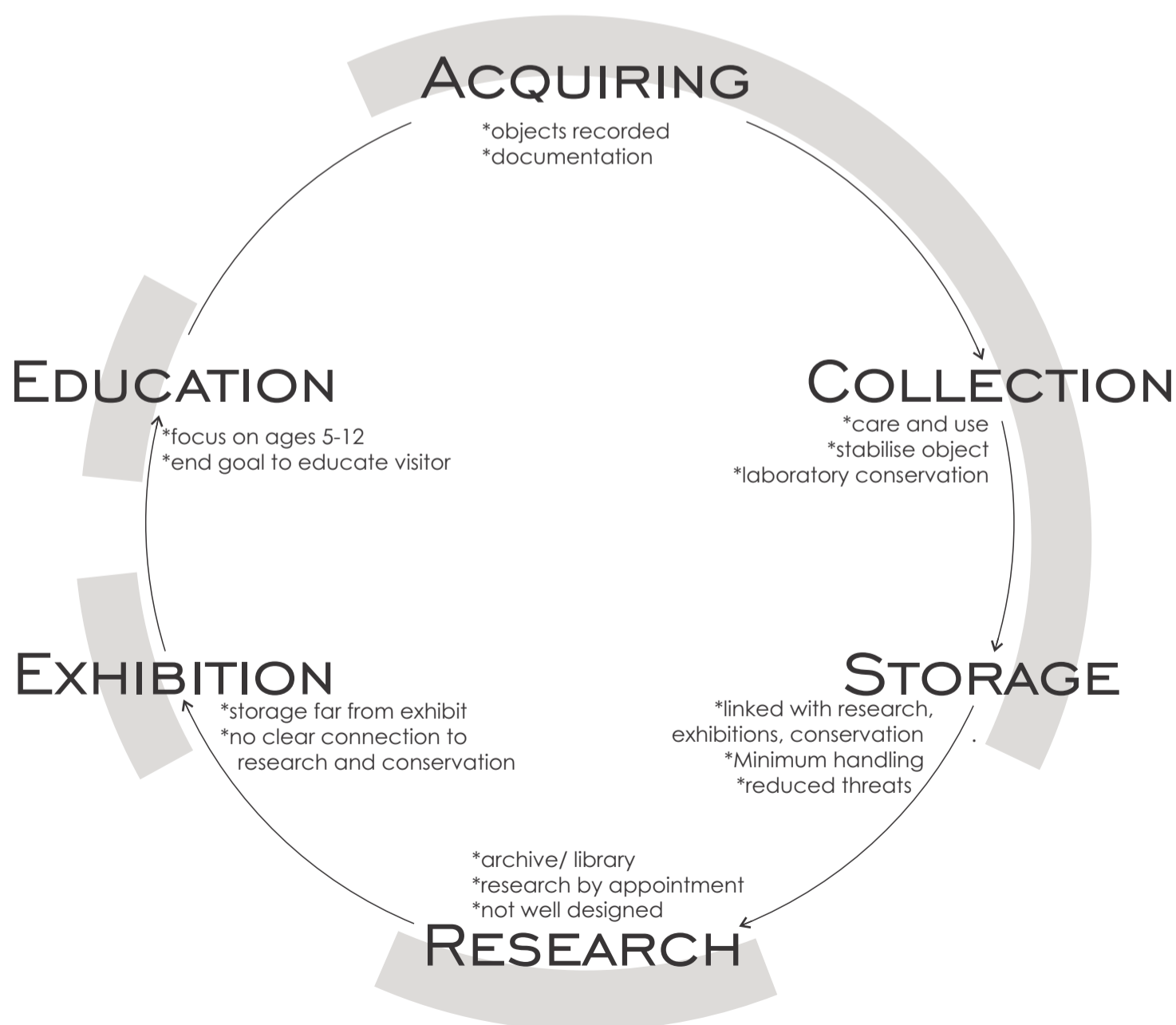


Diagram 3.3.1. Management and physical aspects of D: NMCH

### 3.3.3. Conclusion

The D:NMCH does not comply with the standards and missions as set out by ICOM and Ditsong Museums of South Africa.

The intervention to be designed should convey the mission and vision as set out by the above mentioned institutions. As the collection is at the heart of museum activities, it is important to showcase it in an innovative manner to enhance the museum experience for present and future generations. The overall visitor experience of the museum should not be neglected as this experience starts at the entrance to the museum.

### 3.4. VISITOR LEARNING

"A museum communicates with the visitor through presentation; the juxtaposition of objects with other objects; through interpretation; use of media; and creation of atmosphere" (McLean 1997).

The museum is an educational resource, thus it is important to look at learning theories. Learning theory (within the museum) is how information is absorbed, processed and retained during learning. There are different types of learning theories as seen in diagram 3.4.2. Socio-constructivism is the most appropriate learning theory within the museum setting.

Social constructivism was developed by Lev Vygotsky, a Soviet psychologist. Vygotsky (1978) viewed learning as a profoundly social process and also emphasized dialogue. Vygotsky also argued that cognitive functions originate in, and must therefore be explained as "products of social interactions and that learning was not simply the assimilation and accommodation of new knowledge by learners; it was the process by which learners were integrated into a knowledge community" (Berkeley 2015).

"Knowledge is not simply constructed, it is co-constructed" (Berkeley 2015).

Learning is voluntary and self-directed in the informal educational environment of museums. "(Learning) is driven by curiosity, discovery, free exploration and the sharing of experiences with companions" (Screven 1993). There is no reason for visitors to pay attention except for their own sake. "To achieve both visitor attention and communication, exhibitions need goal-directed and discovery activities that reward appropriate attention" (Screven 1993). Discovery activities include making predictions, completing a task or resolving a question. The quality of visitor attention varies from passive to active involvement.

The manner in which visitors absorb information starts with their initial experience of the museum. If a visitor's first impression of the museum is negative, they will move through the exhibitions and view the information with this negative outlook. Visitors are influenced to visit a museum by awareness, accessibility, relevance and perceptions of the museum. (McLean 1997.) Visitors often limit their time spent in museums, thus the more time a visitor perceives an exhibition or text to require, the less likely they will be to attend to it without compelling reasons to do so.

"(E)ach visitor learns in a different way, interpreting information from their previous knowledge, experience, and beliefs" (McLean 1997:82). Exhibitions make information accessible to the public eye, by making it visible in an explanatory way.

The entrance, foyer and open gathering space of the D: NMCH are critical in creating a first impression and stimulating the visitor's curiosity. These key areas will facilitate learning by establishing a central space where visitors can access new information. Visitors will also be able to socially experience the museum environment in these public spaces. The foyer and open gathering space should draw attention to curiosity, discovery, free-exploration and sharing of experiences with companions.

**"TO ATTRACT, TO INTEREST, AND FINALLY TO INSTRUCT THE AVERAGE SENSATION-SEEKING SIGHTSEER IS AT ONCE THE FUNCTION AND THE PROBLEM OF THE PUBLIC MUSEUM"** (Cain 2012:758)

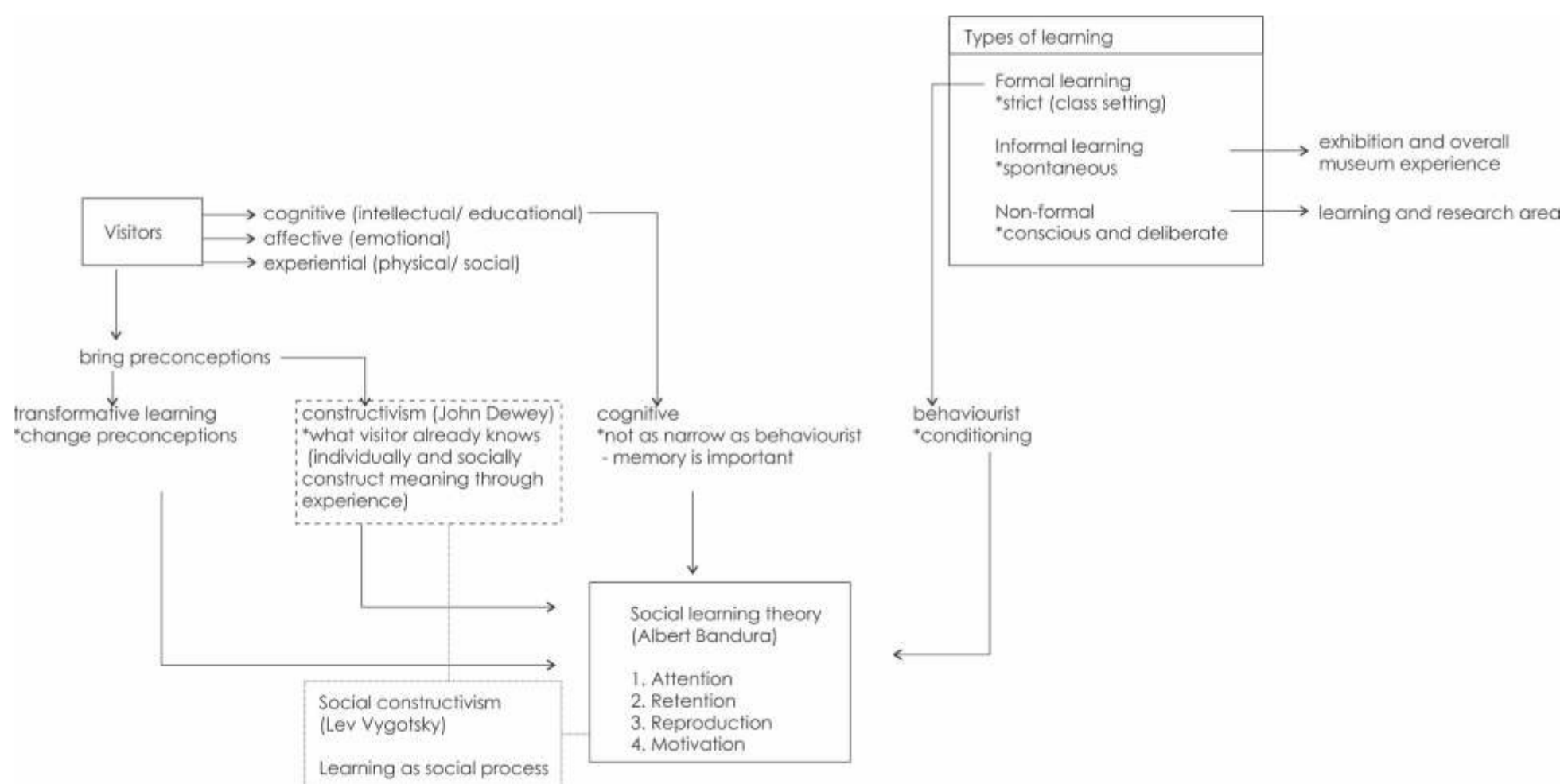


Diagram 3.4.1. Learning diagram

The current way in which the D:NMCH displays information is not successful. Two exhibitions at the D:NMCH will be investigated with regards to learning. *Sculptured in Clay* and *San Access to Power*, as seen in Chapter 2, Museum Visit 1, will be investigated.

The *Sculptured in Clay* exhibition (Figure 3.4.1.) contains information panels on the wall and display cases with clay figurines. The exhibition is to be viewed from left to right. The information panels are graphically successful in the manner in which information is displayed. A multistage text system is used. This system contains overarching text, main text, exhibit text, text as titles and historical quotes. (Bertron, Schwarz, Frey 2012.) This system allows visitors to view and absorb the information according to their learning needs. Figure 3.4.2. shows text as titles, overarching text and main text.

There are three levels of learning through exploration which is 1. The overall exhibition, 2. The informational level as adjacent display case, 3. The informational level as information in drawers (hidden). The *Sculptured in Clay* exhibition only incorporates the first two levels of learning through exploration which is the overall exhibition content with adjacent display cases.

The *Sculptured in Clay* exhibition is encompassing of the objects on display, but there is no real attraction for visitors to learn more about the figurines on display. Even though the graphic quality of the information panels is successful, another layer of information is needed to fully allow for various learning abilities.

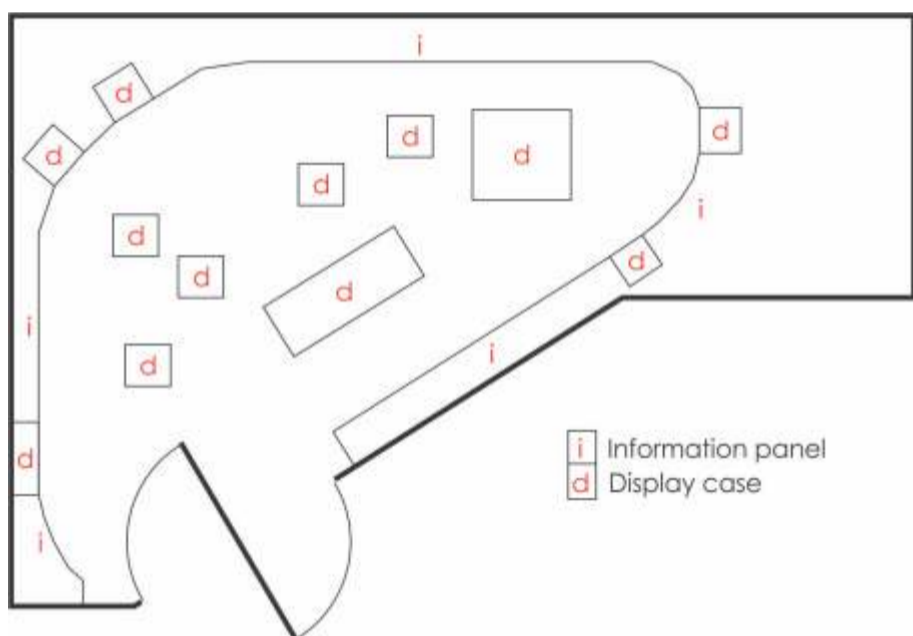


Figure 3.4.1. *Sculptured in Clay* exhibition diagram.



Figure 3.4.2. Multistage text system

The *San Access to Power* exhibition (Figure 3.4.3.) contains information panels on the wall, rocks on display platforms and display cases. This exhibition is intended to be viewed from the entrance (indicated at the bottom of figure 3.4.3.) to the exit (at the top of figure 3.4.3.). The information panels can however be seen as free standing elements, and not according to a specific timeline, and can thus be viewed as the visitor desires. The panels are lit from behind to attract the visitor to read the information. A problem when reading the information is fatigue due to the length and size of the text. Visitors will usually avoid these type of panels due to the amount of information provided on one level of display. This exhibition only incorporates the first two levels of learning through exploration which is the overall exhibition content with adjacent display platforms.

The rocks on display are highlighted with spot lights (Figure 3.4.4.). This attracts the visitor's attention to the rocks. There are twelve rocks on display in this exhibition, but there is no information provided on the rocks displayed so visitors cannot learn more about these rocks.

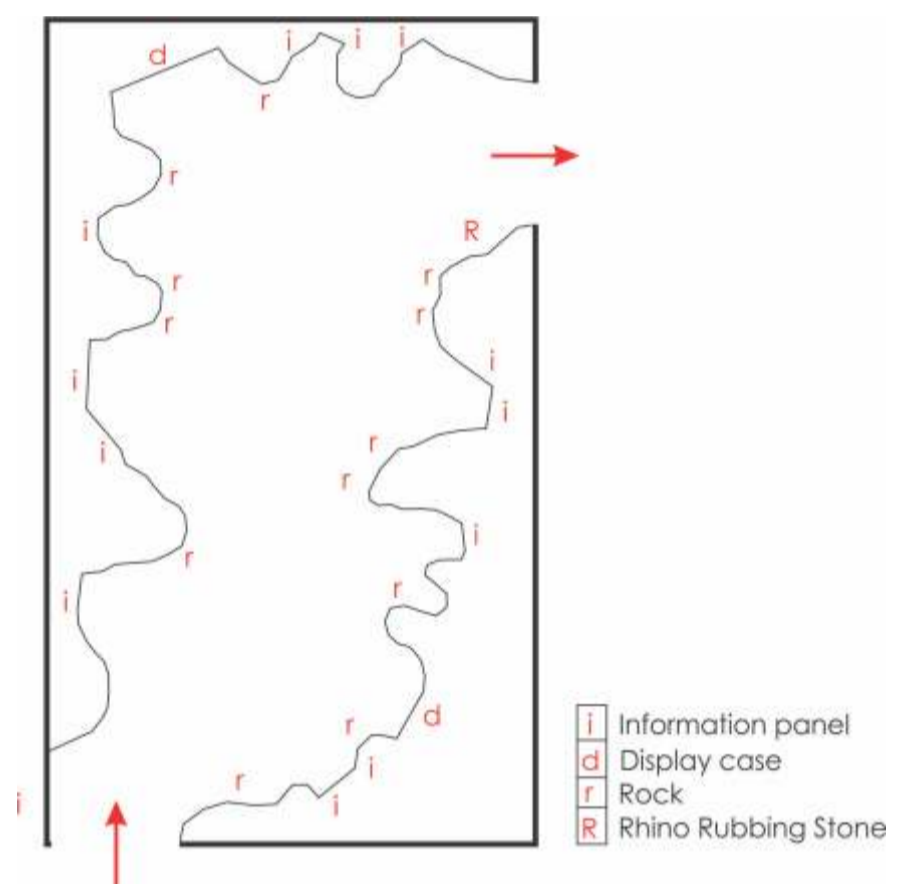


Figure 3.4.3. *San Access to Power* exhibition diagram.



Figure 3.4.4. Rock on display pedestal.

Exhibitions should become forums for the public where they can fulfil educational tasks as well as respond to demands for entertainment and recreation. "(T)he exhibition is not only a medium but also an interface for the information that is stored in repositories, collections and research projects" (Bertron et al. 2012).

According to Dean (1994) there are three basic types of museum visitors. First there are people who move through a gallery quickly and display exit-oriented behaviour – these people spend very little time closely examining exhibition content. The second group are those who show a genuine interest in the museum collections and experience. But they do not spend much time reading, especially texts that appear difficult or that require too much effort to understand. The object is their main focus. The third group is the minority. They will examine exhibitions with much more attention. These visitors are willing, and usually able to understand the presented materials no matter how technical. They are often frequent visitors to museums and require little enticement to come. "Evoking emotion would compel visitors to learn more about the objects presented" (Cain 2012:760).

Furthermore within these groups there are visitors with different abilities and needs. These range from various physical and mental abilities to people who go to museums for different reasons. Reasons for museum visits can be for entertainment (individual and families), educational (school and university groups) and research (individual and groups). "Museums now focus on creating learning environments, within which people are expected to actively craft their own learning experiences" (Fors 2013: 272).

Visitors have three basic needs when visiting a museum; cognitive (intellectual/ educational), affective (emotional) and experiential (physical/ social). "Learning only takes place where the cognitive and the emotional meet for a specific visitor" (McKenna-Cress 2013) within an experiential context. "Cognitive and aesthetic experience must be mutually supportive" (Bertron et al. 2012:204).

Visitors have three principle means of gathering information:

1. Words – language, both heard and read. This requires the most effort and mental processing to extract meaning.
2. Sensations – taste, touch, smell and hearing are more immediate and associative than words.
3. Images – visual stimulus is the strongest, most memorable of the methods. (Dean 1994:26.)

When visitors utilize their minds beyond reading, when they are engaged to answer questions or solve puzzles, this mental action can stimulate visitors to absorb information. Visitors should use exhibition content as the framework for their learning activities. "(E)ffective educational exhibitions will deliver useful content and be more engaging when focused attention to this content takes place" (Screven 1993).

According to Gutwill, Hido and Sindorf (2015:156) there are four basic dimensions of learning: 1. engagement, the act of participating in an activity; 2. initiative and intentionality; 3. social scaffolding; 4. development of understanding. "Collaboration among visitors has been found to improve investigative inquiry at museum exhibits" (Gutwill et al. 2015:159). These aspects should be implemented in the exhibition intervention design.

It is important to integrate digital media into contemporary museums but also to "prevent that visiting museums become nothing more than 'public television'" (Schittich 2009:9). Traditional museums, as with the D:NMCH, can however overwhelm visitors with the endless rows of display cases. Thus the design intervention in the D:NMCH should lie between a traditional museum and a 'public television'.

Visitors inhabit the museum in terms of how they explore and continually contextualise the museum environment through their movement and multisensory experiences. The intervention design should be developed beyond sensory add-ons that correspond to the traditional "five-sense-sensorium" (Fors 2013: 285). Rather a unified sensory experience should be investigated.

### 3.4.1. Conclusion

Museums make information on their collections available through public programmes such as exhibitions. The D:NMCH exhibitions are traditional learning environments, and should develop into contemporary, multisensory learning environments.

Visitor learning needs to be a combination of cognitive, affective and experiential elements. Thus it is important to make the educational, emotional and social aspects of the museum clear in the first impression the visitor makes of the museum. These elements should provide guidelines for the design of the foyer and gathering space within the D:NMCH.

### 3.5. Wayfinding

**"Wayfinding is much more than just a family of signage collected together"** (DESIGN JD 2015).

Wayfinding can be defined as spatial problem solving, it is the process of making spaces effectively navigable. Three criteria determine the navigability of a space: 1. can the navigator determine his current location; 2. can a route to the destination be found; 3. how well a navigator can accumulate wayfinding experience in the space. (Foltz 2015.)

Cognitive maps, also known as stored memories, are also used to inform wayfinding. "(H)umans acquire, code, store, decode, and use cognitive information as part of their navigation and wayfinding activities" (Golledge 1999). Cognitive maps refer to when environmental information is encoded by the visitor so that it can be used to determine their location at any moment, where specific objects are in surrounding spaces, how to navigate from one place to another or how to communicate this spatial knowledge to others.

"When the environment is new or unexperienced, possible learning strategies include, 1. active search and exploration; 2. a prior familiarisation with secondary information sources; and 3. experience of the environment using controlled navigational practices" (Golledge 1999).

Visitors' prior knowledge of a setting can play a critical role in understanding the space. The visitor uses their memories of similar situations, for example previous visits to other museums, to inform their perception of their current museum visit.

Wayfinding should create an identity for a space, increasing accessibility and functionality of the space. Successful wayfinding will make visitors feel confident to use the space, relaxed and ideally leave them with positive memories of their visit. "When executed successfully, the system can reassure users and create a welcoming environment, as well as answer questions before users even ask them" (Aust 2006).

Ineffective wayfinding systems do not give the visitor enough information to decide their course action. The D:NMCH has an ineffective wayfinding system. The visitor devotes a lot of time and energy in searching for their desired location. Thus they rely on staff to direct them, which in itself becomes time consuming. Visitors become so frustrated with the environment that they may not return, this is clear in the museum visit analysis of Chapter 2.

Too much information can be as ineffective as too little. For example when too many different signs are used the visitor can become overwhelmed and still do not know how to navigate the space. Thus the development of a hierarchy of information is a critical component of wayfinding. This relates to the legibility of a space, which influences the rate at which an environment can be learned.

Attributes that determine the visitor's choice of exploring an environment relates to the following: physical distance, travel time, ease of wayfinding, safety and scenic beauty. (Golledge 1999.)

Principles for effective wayfinding include the creation of an identity at each location, the use of landmarks to provide orientation cues, well-structured paths, not too many choices, signage at decision points, and the use of sight lines.

### 3.5.1. IDENTITY AT EACH LOCATION

"This principle indicates that every place should function, to some extent, as a landmark – a recognizable point of reference in the larger space" (Foltz 2015).

The identity of the location is what makes the space distinguishable from surrounding spaces. Spaces are grouped together, physically or aesthetically, according to common attributes.

"Identifiable places form the building blocks of our cognitive maps and the spatial anchors for the decisions made during wayfinding" (Foltz 2015).

The D: NMCH does not have any distinguishable spaces, apart from exhibitions which are distinguishable by their content. Because the spaces are not distinguishable it becomes difficult for the visitor to determine and recover their location within the larger environment.

### 3.5.2. LANDMARKS TO PROVIDE ORIENTATION CUES

"Landmarks are the bricks of our spatial knowledge" (Golledge 1999).

Landmarks are memorable locations that help orientate the visitor. These can be distinguished spaces or memorable objects within general spaces. Memorable objects can be elements that communicate additional information. Too many landmarks in one space contradicts their usefulness. Thus nodes of various significance are used to mark points where wayfinding decisions are made.

"Landmarks associated with decision points, where the navigator must choose which path of many to follow, are especially useful as they make the location and the associated decision more memorable" (Foltz 2015).

Landmarks should be capable of attracting attention, being instantly recognised, contain individual significance and/or act as anchor points for organising other spatial information into a layout. (Golledge 1999.)

The D: NMCH does not have many landmarks that help in wayfinding. The entrance walkway is the first landmark the visitor encounters. The walkway arch can be seen from the parking area and acts as an initial orientation landmark. Curved walls are used to demarcate certain functions within the museum. These curved walls define landmarks to help orientate the visitor. Functions behind these curved walls include vertical access points, ablution facilities and the auditorium (Figure 3.5.1.). Both of these existing landmarks are successful on an architectural level, but do not contribute to visitor wayfinding as they are not clearly defined within the main exhibition areas of the museum. Thus these areas become difficult to navigate.



Figure 3.5.1. Curved wall indicating landmark as seen from exterior.

### 3.5.3. CREATE WELL-STRUCTURED PATHS

A well-structured path should have a clear beginning and end. "A well-structured path maintains a navigator's orientation with respect to both the next landmark along the path and the distance to the eventual destination" (Foltz 2015).

Exhibitions with timelines are examples of where there is a start, extent and end that form the well-structured path. Exhibitions with different messages, should have a clear introduction and conclusion, which encapsulates the path, progress on this path is marks by moving from one message to the next.

There are no well-structured paths within the D: NMCH. The entrance walkway is the main path from where visitors move into adjacent spaces. However, this path is not well-structured and defined. The walkway does not have diversity in appearance or any additional signage to inform the visitor of adjacent spaces. There are no paths between exhibitions, there is only the main event space that connects these spaces. The Objects with Stories exhibition is exhibited according to a timeline. The exhibition has two entrances which results in confusion when viewing the objects on display. This results in the exhibition to be viewed in a negative manner.

### 3.5.4. CREATE REGIONS OF DIFFERING VISUAL CHARACTER

Spaces should ideally be subdivided into regions with a distinct set of visual attributes to assist in wayfinding. These regions do not have to have sharply defined boundaries, but should show some indication of different attributes.

Regions assist wayfinding by providing another set of cues for recovering location. The use of enclosures create regions in large spaces or within exhibitions. Regions are reinforced by variations in colour and material treatment of interior elements, shape differences and lighting level changes.

The visual identity of each exhibition within the D: NMCH defines it as a region, apart from the rest of the museum. Different regions within the museum is unsuccessful as the museum looks like one large region with no defining elements. The same colour, material and lighting levels are used within the museum. The museum, apart from the walkway, is very dark and monotonous. This is an important aspect that will provide guidelines when designing the foyer and gathering space.

### 3.5.5. DON'T GIVE USER TOO MANY CHOICES IN NAVIGATION

The organisation of a space should have a primary path for visitors to follow. From this primary path visitors will take detours to other spaces. Navigation becomes difficult if there are too many detours available for the visitor to take. In some instances the visitor will miss some areas due to the many detours available. Diagram 3.5.1. illustrates the exponential result of too many detours.

This relates to the unsuccessful implementation of the walkway as a well-structured path within the D: NMCH. There are a lot of detours to take from this primary path, but no indication as to where these decision points will be located. Within the main museum level there are no detours that can become confusing as the exhibition spaces are accessed from the multi-functional event space.

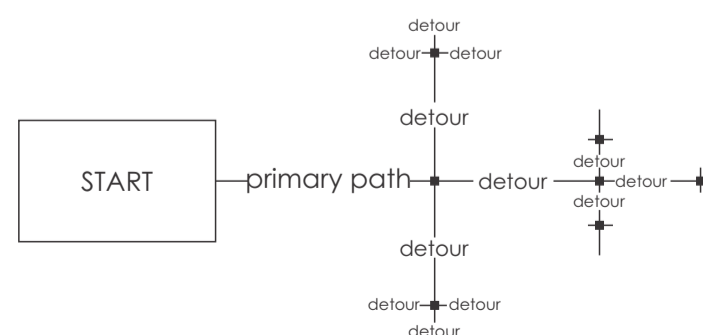


Diagram 3.5.1. Primary path and detours.



### 3.5.6. USE SURVEY VIEWS

A map is a valuable navigation aid. It places the entire space within the visitors' view, from where several judgements can be made. Some judgements include the location of the navigator, their immediate vicinity, routes and facilities available and approximate distances to these facilities. The physical map can provide the basis of the visitor mental map. These maps can be implemented as a general map at the entrance to the museum, a brochure map or maps mounted near specific exhibitions. A map serves as reference material and should not solely be relied on.

The map given at the D: NMCH is clear, but not professional. (As discussed in Chapter 2, Visit 3). This map helps the visitor navigate through the exhibitions, but gives a negative impression of the museum. Another negative aspect is that the map is not always available to visitors.

### 3.5.7. PROVIDE SIGNS AT DECISION POINTS TO HELP WAYFINDING DECISIONS.

Signs should be placed, where necessary at decision points. These decision points are where the visitor must make a wayfinding decision. Signs should help the visitor reach their eventual goal. Signs should be placed where it is important for the visitor to make the right wayfinding choice, or where there is no clear indication of what lies ahead and self-exploration is not desired.

The hierarchy of information to be used on signs is important. This results in the choice of typeface, font, size, spacing of letters, symbols and colour contrast.

Signage at the D: NMCH is unsuccessful in the way it is presented and the amount throughout the building. There are not many signs providing additional information to visitors. The signs that are there, are old and neglected (Figure 3.5.2.), and in some instances hidden behind objects, plants or additions. The fire safety signage (Figure 3.5.3.) is successful in the museum as it is large enough to be seen from a distance, has colour contrast between symbols and background, and sign to background surface. There are evacuation route maps mounted on the walls in certain areas (Figure 3.5.4.)

### 3.5.8. USE SIGHTLINES TO SHOW WHAT'S AHEAD

An extensive view in a particular direction is used to draw the visitor in that direction. This encourages the visitor to move further into the space. Sightlines generally have a goal, also referred to as "visual magnets" (Foltz 2015) to navigate towards. This goal is intended to spark the visitor's interest and acts as reward for choosing this path. Sightlines should be thought of as an alternative to signs.

There are no visual magnets within the D: NMCH. The spaces do not contain elements that draw visitors further into the space or that spark their interest. Sightlines are not successfully executed within the museum, as the interior is monotonous with no visual interest.

### 3.5.9. CONCLUSION

"The first class of principles develop a basic vocabulary of spatial features that assist wayfinding and imageability: identifiable places, landmarks, paths and regions... The second class are about the views that the navigator has into the space, and how designers can provide information necessary for wayfinding and decision making" (Foltz 2015).

The existing design of the D: NMCH does not incorporate a successful wayfinding system. The museum is difficult to navigate for first time visitors as well as returning visitors. The lack of wayfinding elements in a monotonous space leads to fatigue. The criteria to determine the navigability of the space are not met within the D: NMCH. A visitor cannot easily determine their location within the larger context of the museum, routes to the next destination are not well-structured and the overall difficulty of spatial problem solving make the spaces unnavigable.

Many people are unaware of consciously using specific wayfinding strategies.

### 3.6. CONCLUSION

The study of museology was used to determine best practice in museum design. The D: NMCH does not comply with the standards and missions as set out by ICOM and Ditsong Museums of South Africa. Visitor learning theory was studied to determine how the museum is used as an educational resource. The traditional visitor learning at the D: NMCH should develop into contemporary, multisensory learning environments. The navigability of the D: NMCH is difficult to manage for first time visitors as well as returning visitors. Principles of wayfinding was studied to establish current usage within the D: NMCH and to provide guidelines for further interventions.

The theories investigated, museology, visitor learning and wayfinding, will provide guidelines for the design of the entrance, foyer and gathering space within the D: NMCH.



Figure 3.5.2. Neglected signage



Figure 3.5.3. Fire safety signage



Figure 3.5.4. Evacuation route signage

